

CubeSat form magnetic electron spectrometer for auroral energies (Auroral Electron Spectrometer)

Completed Technology Project (2017 - 2018)



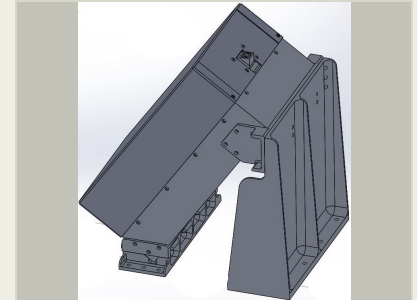
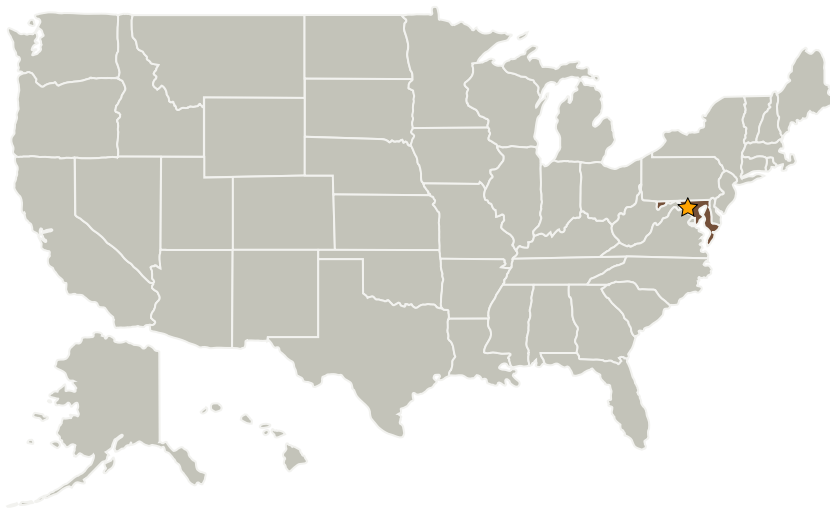
Project Introduction

Our ultimate objective is to produce a prototype electron magnetic spectrometer with low power consumption and a smaller volume and lower mass than the typical spectrometers historically flown on rockets and satellites for auroral research.

Anticipated Benefits

This prototype magnetic spectrometer will have advantages over traditional ones, including the ability to sample at high time resolution, reduction in size and power, and reduction in the risks associated with high voltage.

Primary U.S. Work Locations and Key Partners



Mechanical model of current electron magnetic spectrometer prototype.

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Organizations Performing Work	Role	Type	Location
★ Goddard Space Flight Center (GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations

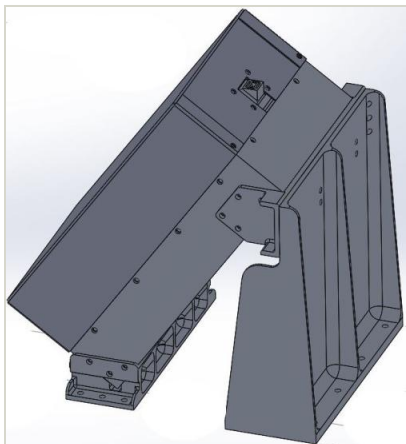
Maryland

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Images



Electron Spectrometer Mechanical Representation

Mechanical model of current
electron magnetic spectrometer
prototype.

(<https://techport.nasa.gov/image/28221>)

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate
(MSD)

Lead Center / Facility:

Goddard Space Flight Center
(GSFC)

Responsible Program:

Center Independent Research &
Development: GSFC IRAD

Project Management

Program Manager:

Peter M Hughes

Project Manager:

Nikolaos Paschalidis

Principal Investigator:

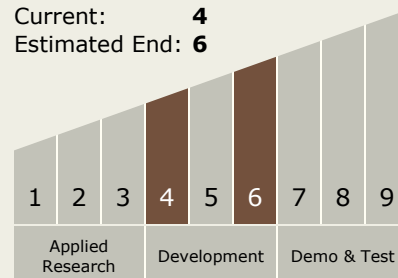
Marilia Samara

Technology Maturity (TRL)

Start: 4

Current: 4

Estimated End: 6



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.3 In-Situ Instruments and Sensors
 - └ TX08.3.1 Field and Particle Detectors

Target Destinations

The Sun, Others Inside the Solar System

Supported Mission

Type

Push